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KRASNYY PROLETARIY PLANT CUTS DIAMOND CONSUMPTION

Conservation of industrial diamonds used in truing grinding wheels and the introduction of diamondless truing are problems which have been under study at the Krasnyy proletariy Plant since 1944.

Truing heads with 80 - 150 milcometers x 20 - 32 millimeters carborundum abrasive wheels was tried on a large scale until 1948. While the truing was generally satisfactory, the heads were bulky and heavy and required a great deal of manual labor in installation and removal.

The plant had to design a small, compact, and light truing device for use in the shops. The following means were tried: (a) hard alloy truing tools; (b) "AZ" wheels made by the Leningrad Experimental Abrasives Plant and the VNIIMASh, 60 x 6 x 20 millimeters superhard wheels made by the Chelyabinsk Plant, and "Zinterkorund" wheels; (c) metal cutters of various types; and (d) 80 - 150 millimeters carborundum abrasive wheels.

Very satisfactory results were achieved with a matal disc wheelhead. Steel 20X, 62 - 65 ERC hardness. was used. The life of these discs is 2 - 3 weeks when truing 500 millimeter wheels.

Among the parts ground by wheels treated as above are Type A thrust centers (tsentr upornyy tipa A) and pistons ground to a precision of 0.015 millimeter. The grinding machine used 400 x 50 x 127 millimeter wheels, 46 grain, C_1 hardness.

The use of diamonds has been completely eliminated on 20 percent of the available cylindrical grinding machines and partially eliminated on the remaining in some operations.

The introduction of metal disc wheelbeads has effected a saving of 43 percent in combined diamond and hard metal materials during three quarters of 1948 as compared with the came period in 1947.

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